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Notes on the Nolinae (Lepidoptera, Noctuidae) : Four New Species from Japan and Two Species Described by STAUDINGER from Southeast Siberia

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Abstract Four new species, *Nola neglecta*, *N. funesta*, *N. hiranoi*, *Meganola basisignata*, are described, status of *Meganola basifascia* (INOUE) and *M. satoi* (INOUE) are discussed in connection with *M. bryophilalis* (STAUDINGER) and *M. strigulosa* (STAUDINGER), respectively.

Key words Noctuidae, Nolinae, *Nola*, *Meganola*, taxonomy.

In writing this paper I express my hearty thanks to Dr. H.-J. HANNEMANN, Zoologisches Museum der Humboldt-Universität, Berlin, for his kind offices which enabled my examination of STAUDINGER's collection under his curation.

Nola neglecta sp. nov.

Celama nami (part.) : INOUE, 1970, *Bull. Japan ent. Acad.* **6** : 1, nec INOUE, 1956.

Celama ebatoï (part.) : INOUE, 1970, *loc. cit.*, nec INOUE, 1970.

Nola nami (part.) : INOUE, 1982, *Moths Japan* **1** : 662, nec INOUE, 1956.

Nola ebatoï (part.) : INOUE, 1982, *loc. cit.*, nec INOUE, 1970.

I have confused this new species with *N. nami* (INOUE) and *N. ebatoï* (INOUE) for a long time. Distinguished from *nami* as follows :

Usually forewing whiter, course of postmedian line similar, being straight from R_{4+5} to M_3 , but linear, not or extremely weakly dashed on veins, vertical to hindmargin below vein $1A+2A$, while in *nami* it is a little oblique outward there, usually antemedian line also slenderer than in *nami*. From *ebatoï* it is also distinguished by the above mentioned characteristics and moreover the maculation of forewing of this species is greyish, while in *ebatoï* it is brownish, triangular mark at costa inside of postmedian line in *ebatoï* is completely disappeared in this species. Length of forewing: ♂ ♀ 8.5–10mm.

♂ genitalia. Spine-like process of harpe thicker, cornutus more strongly curved than in *nami*. Harpe of *ebatoï* is shorter and thicker at apical half than in *nami* and the present new species. 8th abdominal tergite with sclerotized plate more straightish at lateral margins than in *nami*, apices not incurved, sternite with processes less slender than in *nami*. ♀ genitalia. Signum much narrower at base than in *nami*, central projection longer than in *ebatoï*, colliculum shorter than in the two species.

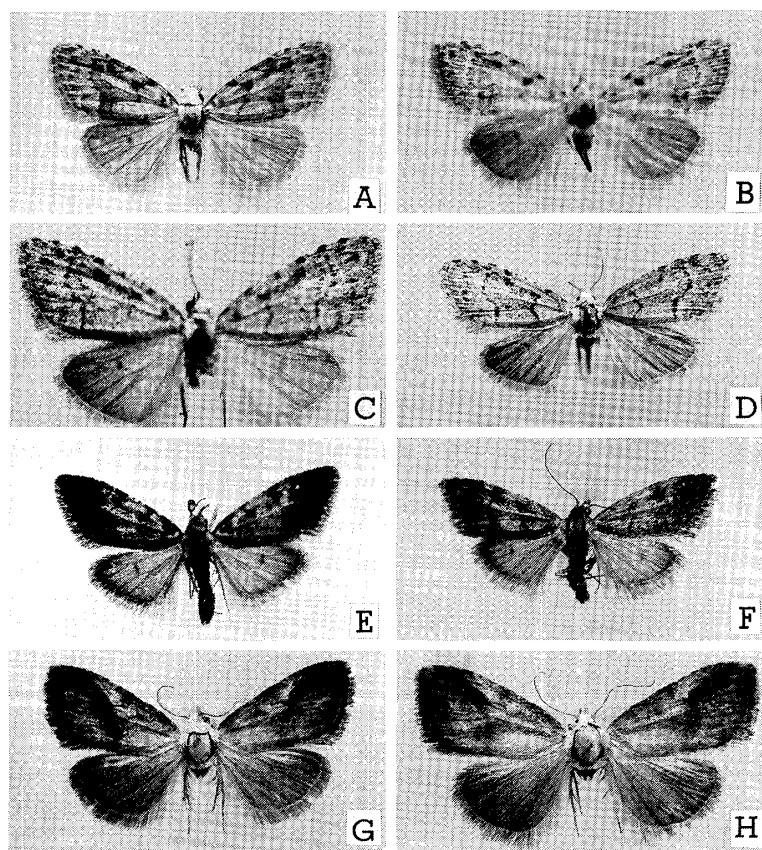


Fig.1. A : *Nola nami* (INOUE), ♂. B : *ditto*, ♀. C : *N. neglecta* sp. nov. Holotype, ♂. D : *ditto*. Paratype, ♀. E : *N. funesta* sp. nov. Holotype, ♂. F : *ditto*. Paratype, ♀. G : *N. hiranoi* sp. nov. Holotype, ♂. H : *ditto*. Paratype, ♀.

Holotype, ♂. Kamikôchi, 1500 m, Nagano Pref., 22. vi. 1984 (H. INOUE). Paratypes. Oakan, Kushiro, 2. vii. 1962, 1 ♀; Jozankei, Ishikari, 4. vii. 1962, 1 ♂ (T. EBATO); Nakasatsunai, Tokachi, 12 & 15. vii. 1989, 2 ♀; Taikimachi, Tokachi, 21. vii. 1989, 1 ♀ (M. KAMEDA); Sôma Spa, Moriyoshi-machi, Akita Pref., 11. viii. 1980, 1 ♀; Hisezawa, Kazuno City, Akita Pref., 6. vi. 1988, 2 ♀ (A. SASAKI). All in coll. H. INOUE.

Distribution. Japan (Hokkaido, Honshu).

N. nami is found from Hokkaido, northern Honshu to as far south as the island of Yakushima through Shikoku and Kyushu, but this species has been secured in Hokkaido, northern Honshu (Akita Pref.) and central highland of Honshu, much rarer than *nami*. Distribution of *ebatoi*, as far as I know, is Honshu (Yamanashi, Gumma, Saitama and Tokyo Prefectures), north Shikoku and north Kyushu.

Nola funesta sp. nov.

Antenna in ♂ strongly fasciculate, arising from two pairs of bundles from each joint, palpus about twice diameter of eye. Antenna, head, body and forewing above black, mixed with white scales. Forewing with basal and central area much paler than

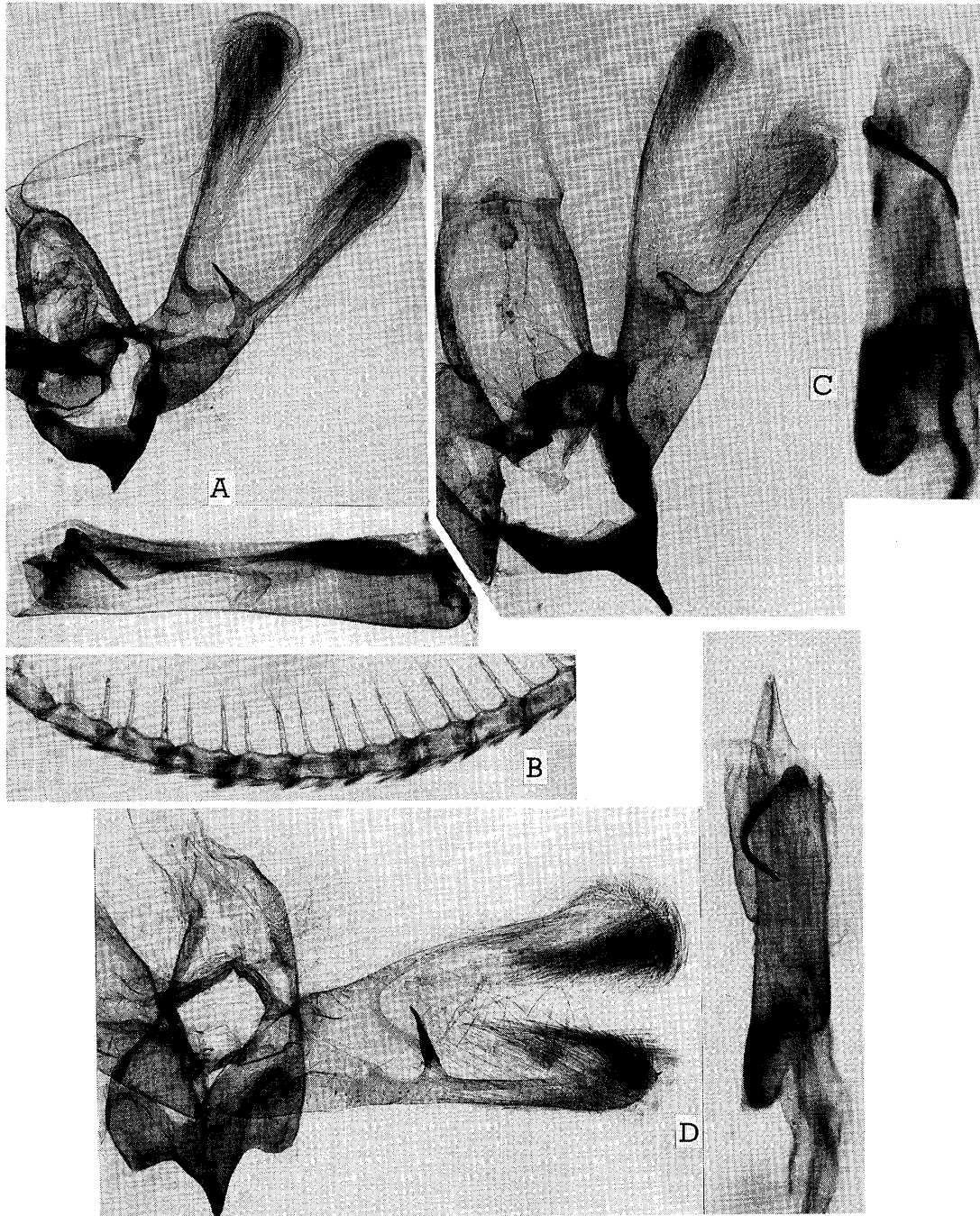


Fig. 2. Male genitalia and male antenna

A : *Nola nami* (INOUE) (HI Slide 13821). B : *ditto*, antenna. C : *N. ebatoi* (INOUE) (HI Slide 13818). D : *N. neglecta* sp. nov. (HI Slide 13810). Aedeagi are greatly magnified.

terminal third, ante- and postmedian lines slender, the latter narrowly separated from terminal black area by pale ground colour, a black fascia at costa just inside of postmedian line, fringe with ill-defined white marks at extension of veins. Hindwing soot-colour, a black bar on discocellulars, terminal area and fringe darker than the rest. Under surface much paler, hindwing usually white, excepting darker terminal area, both wings with discocellular spots but that on hindwing much clearer. Length of forewing : ♂ ♀. 7–8 mm.

♂ genitalia. Harpe very similar to that of *N. ebatoï*, but saccus much shorter, cornutus also shorter. 8th abdominal tergite with central processes similar to *N. nami*, but narrower, those of sternite wider apart, slenderer than in *nami* and *ebatoï*. ♀ genitalia. Ductus bursae very long, signum small, disc-like.

Holotype, ♂. Shimashima Valley, 780 m, Azumi Village, Nagano Pref., 8. iv. 1989 (N. HIRANO). Paratypes. Type-locality, 25. iv. 1976, 1 ♀; 17. iv. 1977, 1 ♀; 25. iv. 1978, 1 ♀; 2. v. 1978, 1 ♀ (N. HIRANO); *ditto*, 14. iv. 1989, 1 ♀ (M. YAMAMOTO); *ditto*, 22. iv. 1989, 3 ♀ (H. INOUE); Danto-Urayama, Kitashitara-gun, Aichi Pref., 2. v. 1987, 1 ♀ (T. TANAKA). All in coll. H. INOUE.

Distribution. Japan (Honshu).

Its small size, fuscous coloration and male antenna distinguish it from the other congeners from Japan very easily. The adult season of this species seems to be confined to early spring at highlands of central Honshu.

Nola hiranoi sp. nov.

Antenna in ♂ shortly bipectinate, the longest rami about twice width of shaft, palpus two and half in ♂ and three times in ♀ diameter of eye. Forewing with R_2 , R_3 , R_{4+5} stalked, hindwing with M_3 and CuA_1 coincident.

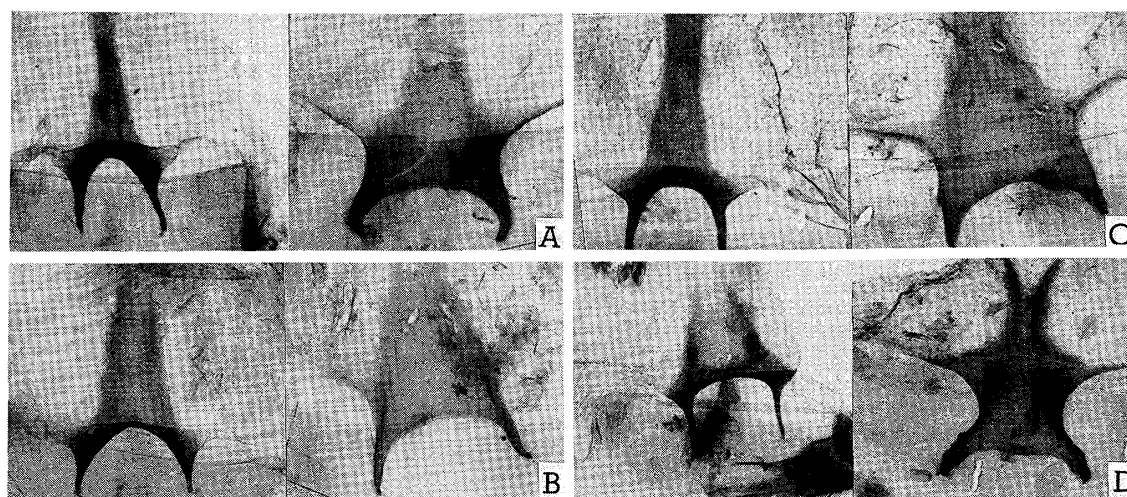


Fig. 3. Male 8th abdominal sternite (left) and tergite (right)

A : *Nola nami* (INOUE). B : *N. ebatoï* (INOUE). C : *N. neglecta* sp. nov. D : *N. funesta* sp. nov.

Head, thorax above pale yellow, forewing pale yellow at base, becoming ochreous towards termen, ante- and postmedian lines shaded with dark brown, the former only visible at costal area, the latter usually a broad fascia from costa to hindmargin, terminal third uniformly darker than the rest of area, but sometimes outside of postmedian fascia paler. Hindwing dark grey-brown. Both wings lack discocellular marks. Length of forewing : ♂ ♀. 8–9 mm.

♂ genitalia. Somewhat similar to *N. trilinea* MARUMO, but uncus longer, stick-like, nearly as long as tegumen when pressed for mounting on slide, valva cleft into

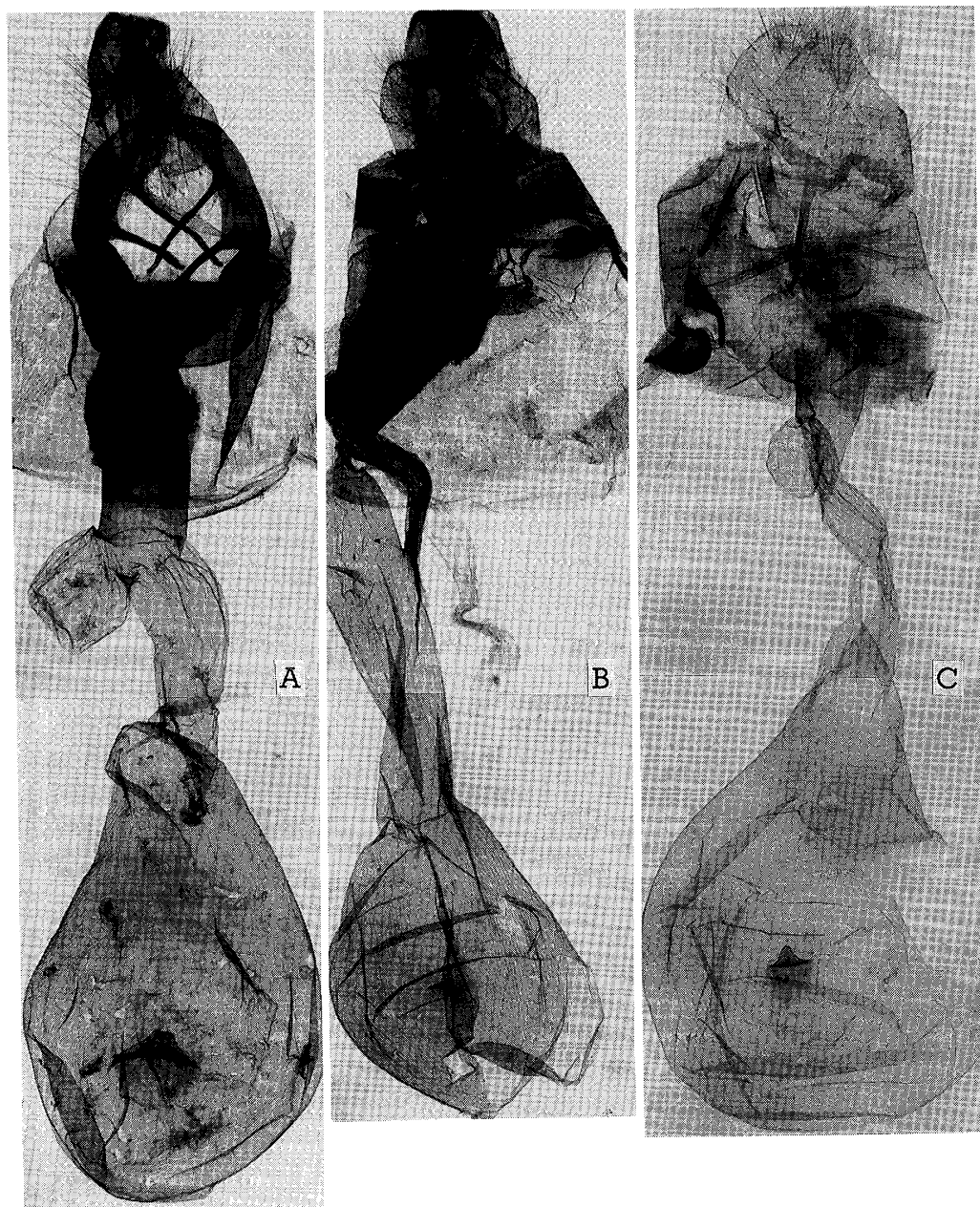


Fig. 4. Female genitalia

A : *Nola nami* (INOUE) (HI Slide 13822). B. *N. ebatoi* (INOUE) (HI Slide 13826). C : *N. neglecta* sp. nov. (HI Slide 3625).

broad two halves, without a spine at tip of sacculus in *trilinea*, harpe strongly projected outward, tip rounded, free part longer than in *trilinea*, saccus triangular, aedeagus much shorter and broader than in *trilinea*, apical area tapering, basal one-fifth suddenly narrowed, no cornutus. 8th abdominal tergite with cephalic margin twice produced triangularly. ♀ genitalia. Ductus bursae slender, membranous, not sclerotized as in *trilinea*, the double signa strongly produced into horn-like processes, their apices

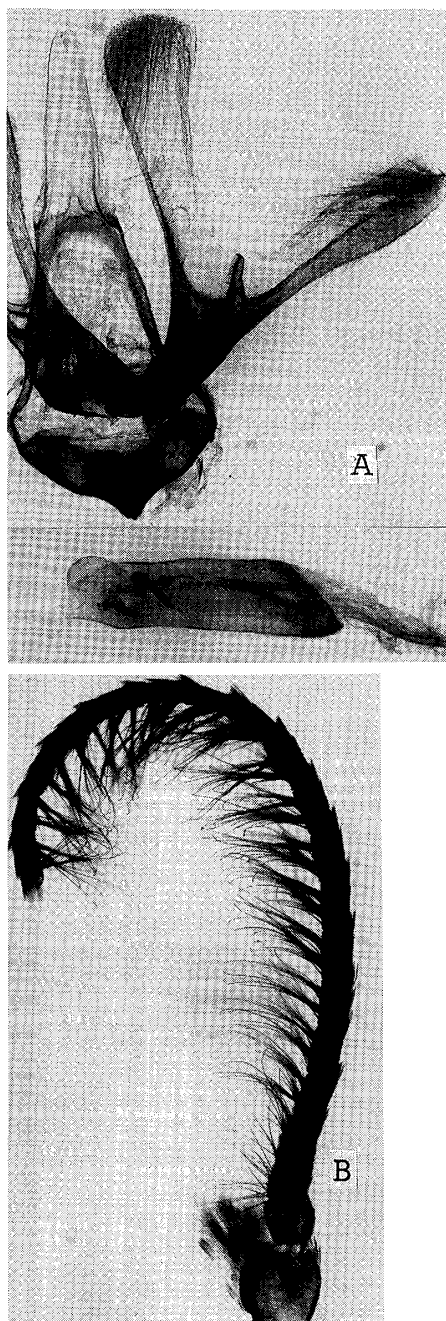


Fig. 5. *Nola funesta* sp. nov.
A : male genitalia (HI Slide 13808).
B : male antenna.



Fig. 6. *Nola funesta* sp. nov.
Female genitalia (HI Slide 13809).

sharply pointed.

Holotype, ♂. Ookuchizawa, Toyoshina, Nagano Pref., 25. vii. 1981 (N. HIRANO). Paratypes. Data as holotype, 1 ♂, 2 ♀; Tanigawa-onsen, 600 m, Minakami, Gumma Pref., 8–11. viii. 1989, 1 ♀ (H. YOSHIMOTO). One male paratype in coll. N. HIRANO and the others in coll. H. INOUE.

Distribution. Japan (Honshu).

Similar to *M. trilinea*, but forewing much more ochreous, typical transverse lines obscure, dark postmedian fascia developed and hindwing darker.

Meganola basisignata sp. nov.

♂. Superficially similar to *M. costalis* (STAUDINGER) from Southeast Siberia and Japan, but much smaller, antennal pectination much longer, longest rami more than five times width of shaft. Wings above darker than in *costalis*, forewing with basal and

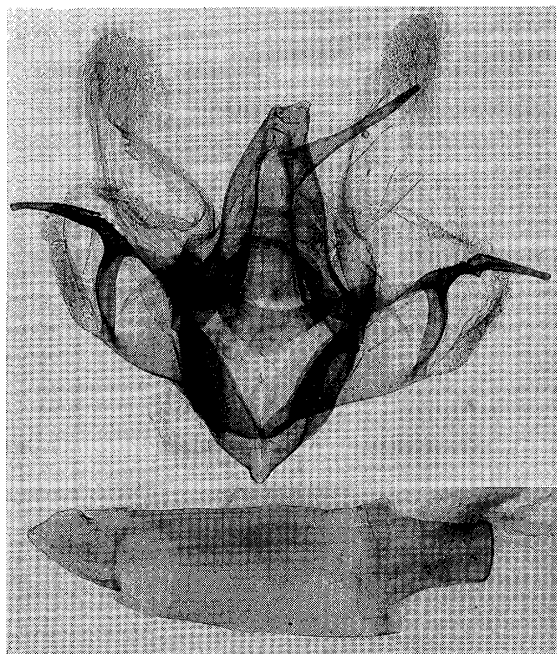


Fig. 7. *Nola hiranoi* sp. nov. Male genitalia (HI Slide 10302). Aedeagus is greatly magnified.

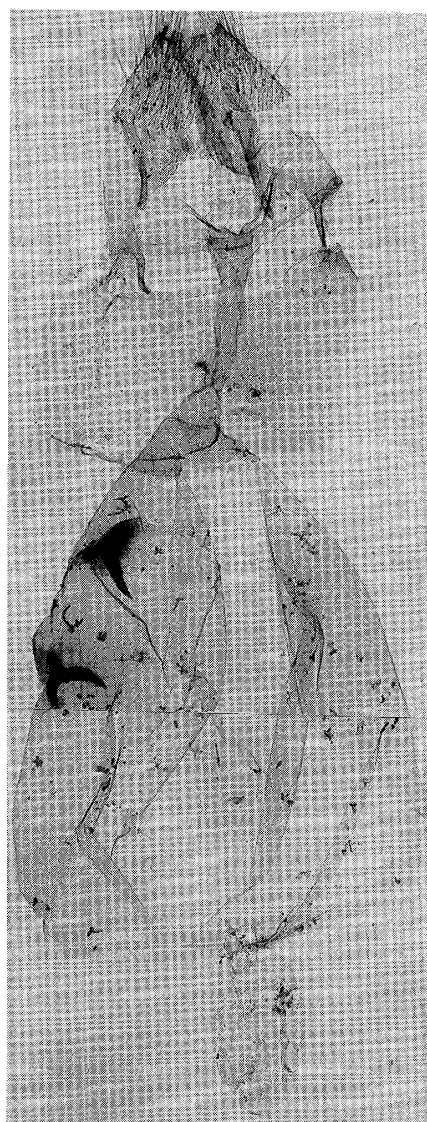


Fig. 8. *Nola hiranoi* sp. nov. Female genitalia (HI Slide 9828).

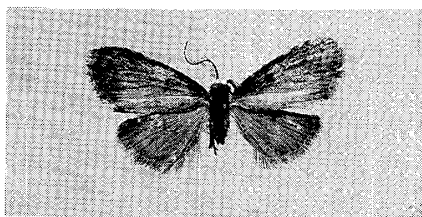


Fig. 9. *Meganola basisignata* sp. nov. Holotype, ♂.

costal black marks, ante- and postmedian lines faint, a black dot on discocellulars on forewing strong but that on hindwing faint. Length of forewing : ♂ ♀. 8 mm.

♂ genitalia. Similar to *M. gigas* (BUTLER) and *M. protogigas* (INOUE) (cf. INOUE, 1982, *Moths Japan* 2, pl. 151 : 6, 7), but uncus much slenderer, saccus rectangular, harpe with ventral extension rounded at tip, process directing dorsad nearly as long as ventral one, tapered, aedeagus slenderer than in the two species cited above. 8th abdominal tergite with thinly sclerotized plate, its side-processes short.

Holotype, ♂. Sakunami Spa, Miyagi Pref., 21. vii. 1969 (T. WATANABE). Paratypes. Nigō, Higashi-Narusa-mura, Akita Pref., 24. vii. 1986, 3 ♂ (M. TAKAHASHI). All in coll. H. INOUE.

Distribution. Japan (Honshu).

Female is unknown. At present this tiny species is only known from northern part of Honshu.

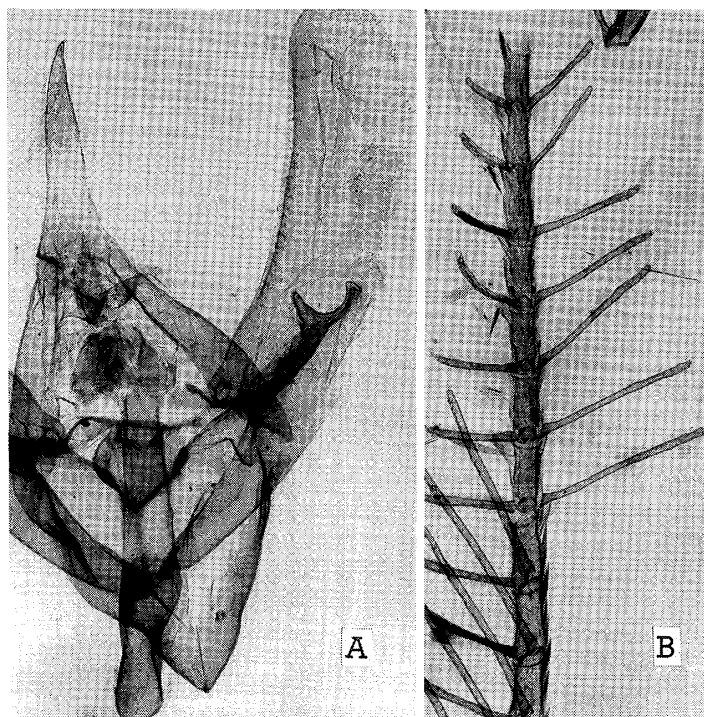


Fig. 10. *Meganola basisignata* sp. nov.

A : male genitalia (HI Slide 12812). B : male antenna.

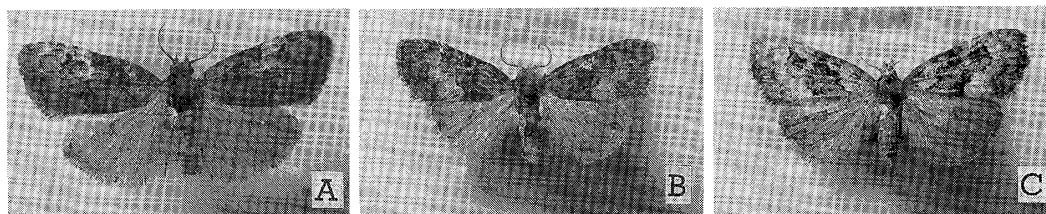


Fig. 11. STAUDINGER's syntypes

A : *Meganola bryophilalis*, ♂. B : *M. strigulosa*, ♂. C : ditto, ♀.

Meganola bryophilalis (STAUDINGER)

Nola bryophilalis STAUDINGER, 1887, in ROMANOFF, *Mém. Lépid.* 3 : 181, pl. 10 : 5.

Roeselia bryophilalis : HAMPSON, 1900, *Cat. Lepid. Phal. Br. Mus.* 2 : 70.

Meganola bryophilalis : POOLE, 1989, in HEPPNER, *Lepid. Cat. (New Ser.)* 118 : 635.

Upon examination of the syntypes (2 ♂, 1 ♀, labelled : Askold, Dörr. 85) of *Nola bryophilalis*, I became confident that *M. basifascia* (INOUE) is conspecific with the former from Southeast Siberia.

Meganola bryophilalis basifascia (INOUE), **stat. nov.**

Roeselia basifascia INOUE, 1958, *Kontyû* 26 : 235, figs. 2, 7.

The race from Hokkaido is separated from the nominate subspecies by much paler outer half or two-thirds of forewing.

Meganola bryophilalis hondoensis (INOUE), **stat. nov.**

Roeselia basifascia hondoensis INOUE, 1970, *Bull. Japan ent. Acad.* 6 : 6, pl. 1 : 9–12.

Honshu race, second (and probably third) generation is very similar to the nominate race, but forewing with whitish area outside middle at dorsal half less developed and the first generation (or spring form) is larger than the nominate race and the second (and third) brood of the same race. The intensity of black maculation is much more unstable than in the other two subspecies.

Meganola strigulosa (STAUDINGER), **sp. rev.**

Nola strigulosa STAUDINGER, 1887, in ROMANOFF, *Mém. Lépid.* 3 : 180, pl. 10 : 4.

The syntypes (1 ♂, 1 ♀, labelled : Amur) were examined. Since LEECH, 1889, *Proc. zool. Soc. Lond.* 1888 : 608, *N. strigulosa* has been treated as a junior synonym of *Nola fumosa* BUTLER (LEECH, 1899; HAMPSON, 1900; STAUDINGER, 1901; INOUE, 1982;

POOLE, 1989) or the northern race of *fumosa* (INOUE, 1958, 1959), but it is distinct from *fumosa* and specifically identical with *Meganola satoi* (INOUE).

This species is distinguished from *Meganola fumosa* by ampler forewing, antemedian line less deeply excurved, the line not so smooth as in *fumosa*, being minutely angled or dentate. In ♂ genitalia separated by shorter and broader uncus, stick-like harpe, in ♀ genitalia a double-banded granular signa, etc.

Meganola strigulosa satoi (INOUE), **stat. nov.**

Roeselia satoi INOUE, 1970, *Bull. Japan ent. Acad.* 6: 4, pl. 1: 19–21.

The Japanese representative has two forms: the first generation (June–July) is nearly as large as the nominate race (expanse of syntypes: 18–19 mm), but the second brood (August–September) is much smaller (expanse: 12–15 mm), usually central area of forewing paler than in the nominate race.

The genitalic differences of *fumosa* and *strigulosa* will be recognised by comparing pl. 351: 3 and pl. 350: 13 (male) and pl. 354: 2 and pl. 353: 6 (female) of *Moths of Japan*, 1982.

摘 要

コブガ亜科覚え書き。日本からの4新種と STAUDINGER が
沿海州から記載した2種について (井上寛)

本文を書くに当たって標本を提供していただいた平野長男, 飯島一雄, 神保一義, 亀田満, 佐々木明夫, 高橋雅彌, 田中多喜彦, 山本光人, 矢崎克己, 吉本浩の諸氏, 故江波戸俊彌, 渡辺徳の両氏に厚く御礼申し上げる。

Nola neglecta INOUE シロバネコブガ (新称)

私が長いあいだ *N. nami* (INOUE) ナミコブガと *N. ebatoi* (INOUE) ウスカバスジコブガと混同していたもので, 北海道でナミコブガと同定されていたものの一部は本種にぞくし, ウスカバスジコブガは今のところ北海道でとれていない。ナミコブガに最も似ているが, 翅全体が真っ白っぽく, 前翅外横線が各脈上でこまかく屈曲せず, 直線的でなめらか。北海道, 本州の東北及び中部山地に分布する。

Nola funesta INOUE クロバネコブガ (新称)

翅は細く, 前翅外縁は傾斜している。体翅とも黒いが, 前翅の基部と中央部は他の部分より淡色。雄触角の繊毛は長い。長野県の島々谷と愛知県北設楽郡段戸裏山で春に採集されている。恐らく中部山地に広く分布しているだろう。

Nola hiranoi INOUE ヒラノコブガ (新称)

雄触角の櫛歯は, 最長の部分で小節の幅の2倍くらい。前翅の基半と頭胸背は淡黄色, 外縁部は暗い赤褐色, 外横線の部分は赤褐色帯となる。*N. trilinea* MARUMO ミスジコブガにやや似ているが, 前翅が赤褐色で横線が不明瞭なので区別できる。長野県豊科町大口沢で平野長男氏が1981年7月25日に採集した2♂2♀と, 群馬県水上町谷川温泉で吉本浩氏が1989年8月8–11日にとった1♀しか検していない。

Meganola basisignata INOUE トウホクチビコブガ (新称)

後出のエチゴチビコブガの第2化に近い大きさで, *M. costalis* (STAUDINGER) ヘリグロコブガにやや似て

いるが、雄触角の櫛歯ははるかに長い。前翅の内外横線は不明瞭で、前縁部でやや黒っぽくなる。前後翅とも横脈点がある。宮城県と秋田県でとれた4♂しか私は検していない。

Meganola bryophilalis (STAUDINGER) モトグロコブガ

ベルリンで STAUDINGER のタイプ標本を検した結果、*M. basifasia* (INOUE) と *bryophilalis* とが同種であるとの確信を得たので、モトグロコブガの北海道亜種を *M. bryophilalis basifascia* (INOUE), 本土亜種を *M. b. hondoensis* (INOUE) とし、沿海州の原名亜種と区別した。

Meganola strigulosa (STAUDINGER) エチゴチビコブガ

上記の種と同じく、タイプ標本（沿海州）を調べたら、*strigulosa* は *M. satoi* (INOUE) と同種なのでエチゴチビコブガを *M. strigulosa satoi* (INOUE) という日本の亜種とした。

Nola strigulosa STAUDINGER は、LEECH, 1889, 以来今日まで *M. fumosa* (BUTLER) クロスジコブガのシノニムとされていたし、一時私(1958, 1959)は沿海州や北海道亜種としていたが、これは明らかに間違いである。前翅内横線が *fumosa* では強く外方に半円形に張り出しているが、*strigulosa* ではそのようなことはない。

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